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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/966,261	10/01/2001	Tomohiko Hattori	110739	5141
25944	7590	02/04/2005		EXAMINER
OLIFF & BERRIDGE, PLC P.O. BOX 19928 ALEXANDRIA, VA 22320			CHANG, RICK KILTAE	
			ART UNIT	PAPER NUMBER
			3729	

DATE MAILED: 02/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/966,261	HATTORI, TOMOHIKO <i>ED</i>
	Examiner	Art Unit
	Rick K. Chang	3729

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 28 December 2004.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-29 is/are pending in the application.
 - 4a) Of the above claim(s) 9-20 is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-8 and 21-29 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 4-5, 8, 21-22 and 25-26 are rejected under 35 U.S.C. 102(b) as being anticipated by R. P. Moore (US 3,523,360).

Moore discloses in Fig. 1 a method of detecting and locating (38) the position of a PCB on the basis of a position of the image of each of the at least one indicium (22) upwardly through 18 using at least one image-taking device (51, 53 and 55). Based on Fig. 1, 38 is only connected to the 16, not 51, 53 and 55. Col. 3, lines 50-51 discloses about error compensation.

NOTE: US 4,951,383 shows another form of an image taking device.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 2-3, 23-24 and 27-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over R. P. Moore (US 3,523,360) in view of Majd (US 5,155,904).

Moore discloses at least one predetermined portion of the PCB through 18.

Moore fails to disclose printed wiring patterns on the front of the PCB.

Majd discloses printed wiring patterns on the front of the PCB (Fig. 2).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Moore by providing printed wiring patterns on the front of the PCB, as taught by Majd, for the purpose of mounting more electronic components on a PCB.

Majd discloses 35 and 33 on the surface of the PCB. Official Notice is taken that it is well known in the art to adapt the head to apply an adhesive agent and a solder.

5. Claim 6-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over R. P. Moore (US 3,523,360) in view of Radobenko (US 3,695,501), and further in view of Tsuda et al (US 3,625,127).

Moore discloses that the image-taking devices are fixed since the table is connected to 38.

Moore fails to disclose that the image-taking devices are located at the respective positions before the PCB is held by the supporting device and manually locating the plurality of image-taking devices.

Radobenko discloses that the image-taking devices are located at the respective positions before the PCB is held by the supporting device (col. 3, lines 10-24).

Tsuda discloses manually locating the plurality of image-taking devices (Abstract).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Moore by the image-taking devices are located at the respective positions before the PCB is held by the supporting device, as taught by Radobenko and Tsuda, for the purpose of making the mounting machine less complex by reducing the number of moving

devices relative to each other and making manual adjustments of the relative positions of the devices in case 38 malfunctions.

6. Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over R. P. Moore (US 3,523,360) in view of Cushman (US 3,713,575).

Moore fails to disclose that the image-taking device contacts the back of PCB before the step of detecting error.

Cushman discloses that the image-taking device (50) contacts the back of 60 before the step of detecting error.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Moore by contacting the image-taking device to the back of the PCB before the step of detecting error to the Moore's apparatus, as taught by Cushman, for the purpose of minimizing the image distortion caused by air space formed therebetween.

Response to Arguments

7. Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection.

Interviews After Final

8. **Applicant note that an interview after a final rejection must be submitted briefly in writing the intended purpose and content of the interview (the agenda of the interview must be in writing). Upon review of the agenda, the Examiner may grant the interview if the examiner is convinced that disposal or clarification for appeal may be accomplished with only nominal further consideration. Interviews merely to restate arguments of record or to discuss new limitations will be denied. See MPEP 714.13 and 713.09.**

Conclusion

9. Please provide reference numerals (either in parentheses next to the claimed limitation or in a table format with one column listing the claimed limitation and another column listing corresponding reference numerals in the remark section of the response to the Office Action) to all the claimed limitations as well as support in the disclosure for better clarity (optional). Applicants are duly reminded that a full and proper response to this Office Action that includes any amendment to the claims and specification of the application as originally filed requires that the applicant point out the support for any amendment made to the disclosure, including the claims. See 37 CFR 1.111 and MPEP 2163.06.

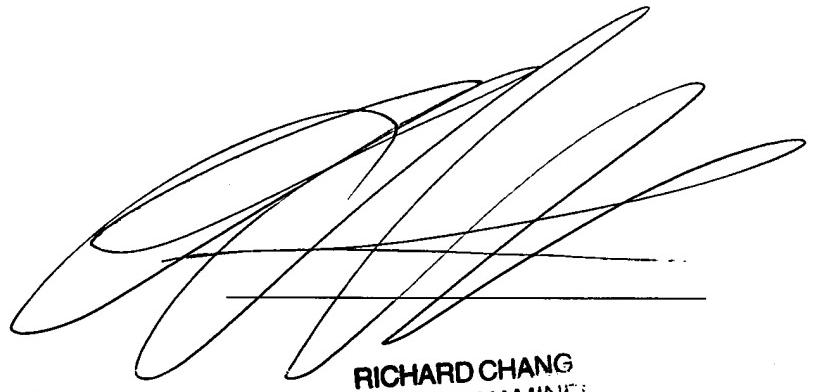
10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

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11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rick K. Chang whose telephone number is (571) 272-4564. The examiner can normally be reached on 5:30 AM to 1:30 PM, Monday through Thursday.

The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9302 for regular communications and (703) 872-9303 for After Final communications.



RICHARD CHANG
PRIMARY EXAMINER

RC

February 3, 2005